What is claimed is:

1. A water-soluble drug-polymer conjugate having the general formula P-X-D:

wherein,

P is a water-soluble polymer;

D is a wortmannin derivative; and

X is a covalent linkage between a water-soluble polymer and the wortmannin derivative.

2. A pharmaceutical composition comprising the water-soluble drug-polymer conjugate of claim 1 and a pharmaceutically acceptable carrier.

3. A method for treating or inhibiting a pathological condition or disorder mediated in a mammal comprising providing to said mammal an effective amount of a water-soluble drug-polymer conjugate of claim 1.

4. A method of claim 3 wherein the effective amount of the water-soluble drug-polymer is 10 to 1000 mg/kg.

5. A method of claim 3 wherein the effective amount of the water-soluble drug-polymer is 0.5 to 10 mg/kg.

6. A method of claim 3 wherein treating or inhibiting comprises inhibition of PI3 kinase.

7. A method of claim 3 wherein treating or inhibiting comprises inhibition of TOR kinase.

8. A method of claim 3 wherein the pathological condition is non-small cell lung cancer.

9. A method of claim 3 wherein the pathological condition is brain cancer, iscaemic heart disease, restenosis, inflammation, platelet aggregation, sclerosis, respiratory disorder, HIV and bone resorption.

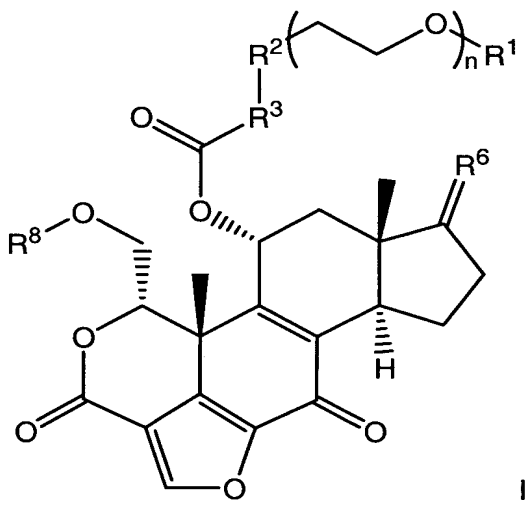
10. A method of claim 3 wherein providing an effective amount is alone or in combination with other agents that modulate growth factor signaling, cytokine response, and cell cycle control.

11. A method of claim 10 wherein the agent is interferon-α.

12. A method of claim 10 wherein the agent is pegylated rapamycin.

13. A method of claim 10 wherein the agent is a cytotoxic.

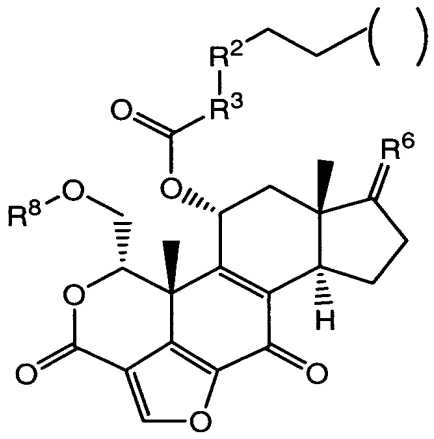
14. A water-soluble drug-polymer conjugate having the structure of formula I



I

wherein:

R^1 is alkyl, or a drug-polymer conjugate of formula (A)



(A);

R^2 is -O-, -NH-, or -S-;

R^3 is alkyl, a cycloalkyl, or aryl;

R^6 is =O or OR^7;

R^7 is H, COR^9 or alkyl;

R^8 is alkyl or H;

R^9 is alkyl, H, aryl, or $-CH_2Ar$; and

n is 1-1000.

15. The water-soluble drug-polymer conjugate of claim 14 wherein n is 250 – 400.

16. The water-soluble drug-polymer conjugate of claim 14 wherein n is 50 – 150.

17. The water-soluble drug-polymer conjugate of claim 14 wherein the molecular weight of polymer is from about 400 to about 80,000.

18. The water-soluble drug-polymer conjugate of claim 14 wherein the molecular weight of polymer from about 1000 to about 8000.

19. The water-soluble drug-polymer conjugate of claim 14 wherein the molecular weight of polymer is from about 4000 to about 6000.

20. A pharmaceutical composition comprising the water-soluble drug-polymer conjugate of claim 14 and a pharmaceutically acceptable carrier.

21. A method for treating or inhibiting a pathological condition or disorder mediated in a mammal comprising providing to said mammal an effective amount of a water-soluble drug-polymer conjugate of claim 14.

22. A method of claim 21 wherein the effective amount of the water-soluble drug-polymer is 10 to 1000 mg/kg.

23. A method of claim 21 wherein the effective amount of the water-soluble drug-polymer is 0.5 to 10 mg/kg.

24. A method of claim 21 wherein treating or inhibiting comprises inhibition of PI3 kinase.

25. A method of claim 21 wherein treating or inhibiting comprises inhibition of TOR kinase.

26. A method of claim 21 wherein the pathological condition is non-small cell lung cancer.

27. A method of claim 21 wherein the pathological condition is brain cancer, iscaemic heart disease, restenosis, inflammation, platelet aggregation, sclerosis, respiratory disorder, HIV and bone resorption.

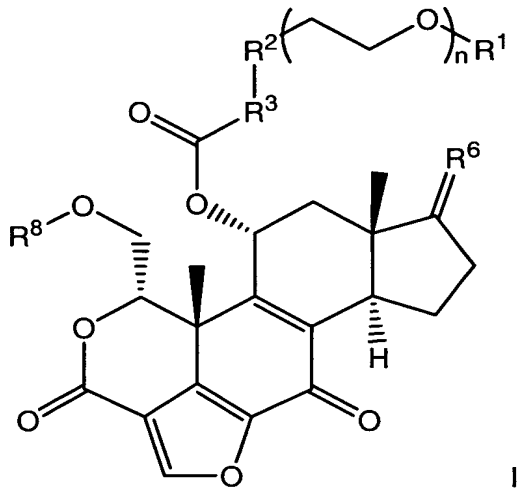
28. A method of claim 21 wherein providing an effective amount is alone or in combination with other agents that modulate growth factor signaling, cytokine response, and cell cycle control.

29. A method of claim 28 wherein the agent is interferon-α.

30. A method of claim 28 wherein the agent is pegylated rapamycin.

31. A method of claim 28 wherein the agent is a cytotoxic.

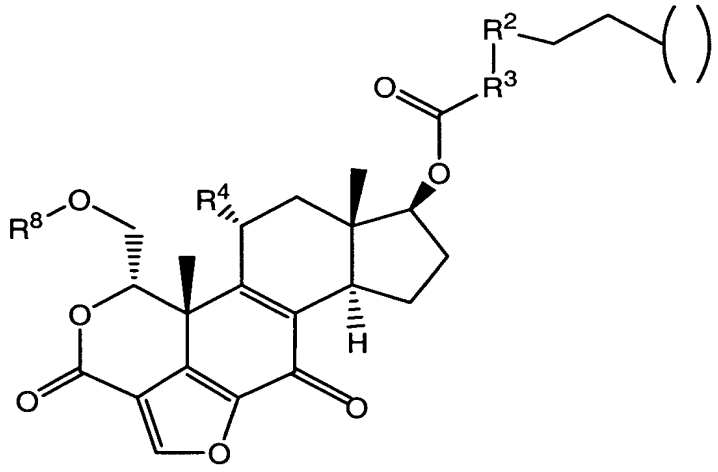
32. A water-soluble drug-polymer conjugate having the structure of formula I:



I

wherein:

R^1 is alkyl, or a drug-polymer conjugate of formula (B)



(B);

R^2 is -O-, -NH-, or -S-;

R^3 is alkyl, a cycloalkyl, or aryl;

R^4 is H, =O, -O-COC_4H_9, or OR^7;

R^7 is H, COR^9 or alkyl;

R^8 is alkyl or H;

R^9 is alkyl, H, aryl, or $-CH_2Ar$; and

n is 1-1000.

33. The water-soluble drug-polymer conjugate of claim 32 wherein n is 250 – 400.

34. The water-soluble drug-polymer conjugate of claim 32 wherein n is 50 – 150.

35. The water-soluble drug-polymer conjugate of claim 32 wherein the molecular weight of polymer is from about 400 to about 80,000.

36. The water-soluble drug-polymer conjugate of claim 32 wherein the molecular weight of polymer is from about 1000 to about 8000.

37. The water-soluble drug-polymer conjugate of claim 32 wherein the molecular weight of polymer is from about 4000 to about 6000.

38. A pharmaceutical composition comprising the water-soluble drug-polymer conjugate of claim 32 and a pharmaceutically acceptable carrier.

39. A method for treating or inhibiting a pathological condition or disorder mediated in a mammal comprising providing to said mammal an effective amount of a water-soluble drug-polymer conjugate of claim 32.

40. A method of claim 39 wherein the effective amount of the water-soluble drug-polymer is 10 to 1000 mg/kg.

41. A method of claim 39 wherein the effective amount of the water-soluble drug-polymer is 0.5 to 10 mg/kg.

42. A method of claim 39 wherein treating or inhibiting comprises inhibition of PI3 kinase.

43. A method of claim 39 wherein treating or inhibiting comprises inhibition of TOR kinase.

44. A method of claim 39 wherein the pathological condition is non-small cell lung cancer.

45. A method of claim 39 wherein the pathological condition is brain cancer, iscaemic heart disease, restenosis, inflammation, platelet aggregation, sclerosis, respiratory disorder, HIV and bone resorption.

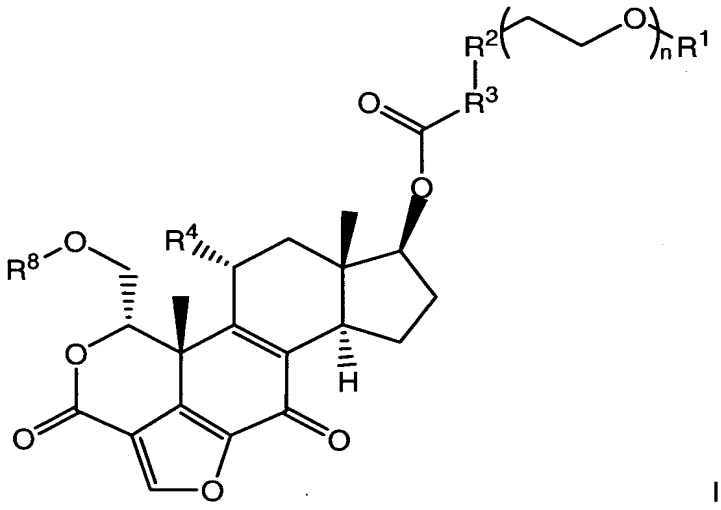
46. A method of claim 39 wherein providing an effective amount is alone or in combination with other agents that modulate growth factor signaling, cytokine response, and cell cycle control.

47. A method of claim 46 wherein the agent is interferon-α.

48. A method of claim 46 wherein the agent is pegylated rapamycin.

49. A method of claim 46 wherein the agent is a cytotoxic.

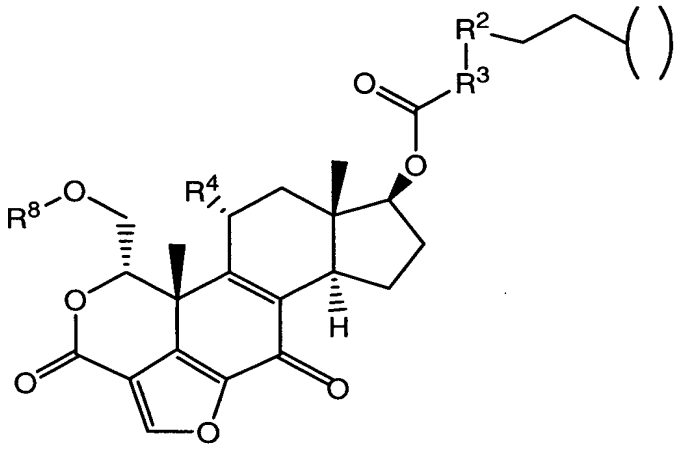
50. A water-soluble drug-polymer conjugate having the structure of formula II



II

wherein:

R^1 is alkyl, or a drug-polymer conjugate of formula (B)



(B);

R^2 is -O-, -NH-, or -S-;

R^3 is alkyl, a cycloalkyl, or aryl;

R^4 is H, =O, -O-COC_4H_9, or OR^7;

R^7 is H, COR^9 or alkyl;

R^8 is alkyl or H;

R^9 is alkyl, H, aryl, or $-CH_2Ar$; and

n is 1-1000.

51. The water-soluble drug-polymer conjugate of claim 50 wherein n is 250 – 400.

52. The water-soluble drug-polymer conjugate of claim 50 wherein n is 50 – 150.

53. The water-soluble drug-polymer conjugate of claim 50 wherein the molecular weight of polymer is from about 400 to about 80,000.

54. The water-soluble drug-polymer conjugate of claim 50 wherein the molecular weight of polymer is from about 1000 to about 8000.

55. The water-soluble drug-polymer conjugate of claim 50 wherein the molecular weight of polymer is from about 4000 to about 6000.

56. A pharmaceutical composition comprising the water-soluble drug-polymer conjugate of claim 50 and a pharmaceutically acceptable carrier.

57. A method for treating or inhibiting a pathological condition or disorder mediated in a mammal comprising providing to said mammal an effective amount of a water-soluble drug-polymer conjugate of claim 50.

58. A method of claim 57 wherein the effective amount of the water-soluble drug-polymer is 10 to 1000 mg/kg.

59. A method of claim 57 wherein the effective amount of the water-soluble drug-polymer is 0.5 to 10 mg/kg.

60. A method of claim 57 wherein treating or inhibiting comprises inhibition of PI3 kinase.

61. A method of claim 57 wherein treating or inhibiting comprises inhibition of TOR kinase.

62. A method of claim 57 wherein the pathological condition is non-small cell lung cancer.

63. A method of claim 57 wherein the pathological condition is brain cancer, iscaemic heart disease, restenosis, inflammation, platelet aggregation, sclerosis, respiratory disorder, HIV and bone resorption.

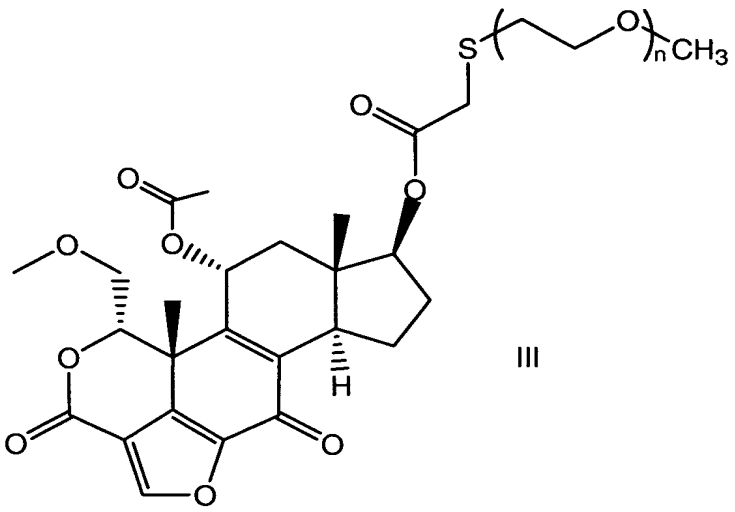
64. A method of claim 57 wherein providing an effective amount is alone or in combination with other agents that modulate growth factor signaling, cytokine response, and cell cycle control.

65. A method of claim 64 wherein the agent is interferon-α.

66. A method of claim 64 wherein the agent is pegylated rapamycin.

67. A method of claim 64 wherein the agent is a cytotoxic.

68. A water-soluble drug-polymer conjugate having the structure of formula III:



III

n is 1-1000.

69. The water-soluble drug-polymer conjugate of claim 68 wherein n is 250 – 400.

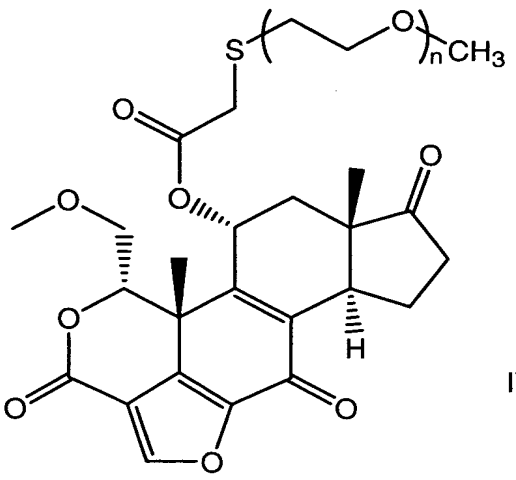
70. The water-soluble drug-polymer conjugate of claim 68 wherein n is 50 – 150.

71. The water-soluble drug-polymer conjugate of claim 68 wherein the molecular weight of polymer is from about 400 to about 80,000.

72. The water-soluble drug-polymer conjugate of claim 68 wherein the molecular weight of polymer is from about 1000 to about 8000.

73. The water-soluble drug-polymer conjugate of claim 68 wherein the molecular weight of polymer is from about 4000 to about 6000.

74. A water-soluble drug-polymer conjugate having the structure of formula IV:



IV

wherein n = 1-1000.

75. The water-soluble drug-polymer conjugate of claim 74 wherein n is 250 – 400.

76. The water-soluble drug-polymer conjugate of claim 74 wherein n is 50 – 150.

77. The water-soluble drug-polymer conjugate of claim 74 wherein the molecular weight of polymer is from about 400 to about 80,000.

78. The water-soluble drug-polymer conjugate of claim 74 wherein the molecular weight of polymer is from about 1000 to about 8000.

79. The water-soluble drug-polymer conjugate of claim 74 wherein the molecular weight of polymer is from about 4000 to about 6000.

80. A pharmaceutical composition comprising the water-soluble drug-polymer conjugate of claim 74 and a pharmaceutically acceptable carrier.

81. A method for treating or inhibiting a pathological condition or disorder mediated in a mammal comprising providing to said mammal an effective amount of a water-soluble drug-polymer conjugate of claim 74.

82. A method of claim 81 wherein the effective amount of the water-soluble drug-polymer is 10 to 1000 mg/kg.

83. A method of claim 81 wherein the effective amount of the water-soluble drug-polymer is 0.5 to 10 mg/kg.

84. A method of claim 81 wherein treating or inhibiting comprises inhibition of PI3 kinase.

85. A method of claim 81 wherein treating or inhibiting comprises inhibition of TOR kinase.

86. A method of claim 81 wherein the pathological condition is non-small cell lung cancer.

87. A method of claim 81 wherein the pathological condition is brain cancer, iscaemic heart disease, restenosis, inflammation, platelet aggregation, sclerosis, respiratory disorder, HIV and bone resorption.

88. A method of claim 81 wherein providing an effective amount is alone or in combination with other agents that modulate growth factor signaling, cytokine response, and cell cycle control.

89. A method of claim 88 wherein the agent is interferon-α.

90. A method of claim 88 wherein the agent is pegylated rapamycin.

91. A method of claim 88 wherein the agent is a cytotoxic.

92. A process for the preparation of a water-soluble drug-polymer conjugate of claim 68 comprising:

a. adding a solvent to 17-dihydro-17-(1-iodoacetyl)-wortmannin to obtain a solution;

b. adding a tertiary amine or sodium bicarbonate to the solution;

c. adding mPEG-sulfhydryl 5000 to the solution of step (b);

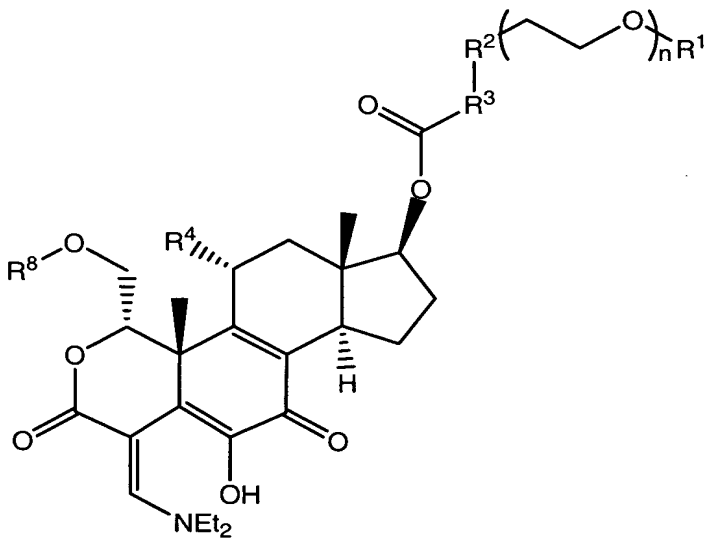
d. stirring the solution of step (c) for 30 minutes;

e. adding ether to the stirred solution;

f. collecting the solid; and

g. washing the collected solid with ether to obtain the pegylated wortmannin derivative.

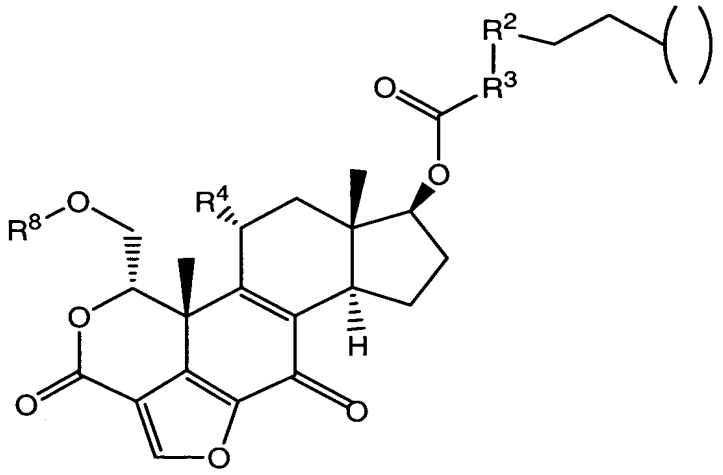
93. A water-soluble drug-polymer conjugate having the structure of formula V:



V

wherein:

R^1 is alkyl, or a drug-polymer conjugate of a single non-repeating formula (V)



(B);

R^2 is -O-, -NH-, or -S-;

R^3 is alkyl, a cycloalkyl, or aryl;

R^4 is H, =O, -O-COC_4H_9, or OR^7;

R^7 is H, COR^9 or alkyl;

R^8 is alkyl or H;

R^9 is alkyl, H, aryl, or $-CH_2Ar$; and

n is 1-1000.

94. A process for the preparation of the compound of claim 93 comprising addition of an amine to a compound of claim 50 to obtain a compound of claim 93.

95. A process of claim 94 wherein the amine comprises diethyl amine.

96. A process for the preparation of a water-soluble drug-polymer conjugate of claim 74 comprising:

a) adding a solvent to 11-desacetyl-11-(1-iodoacetyl)-wortmannin to obtain a solution;

b) adding a tertiary amine to the solution;

c) adding mPEG-sulfhydryl 5000 to the solution of step (b);

d) stirring the solution of step (c) for 30 minutes;

e) adding ether to the stirred solution;

f) collecting the solid; and

g) washing the collected solid with ether to obtain the pegylated wortmannin derivative,

as disclosed.